

**Long Island Sound Study Science and Technical Advisory Committee  
Meeting Summary, February 19, 2010 – Stony Brook University**

**Larry Swanson brought the meeting to order at 9:30 a.m. and participants introduced themselves.**

**2010 LISS Budget Update**

Mark Tedesco presented an update on the 2010 LISS budget. The budget was increased from \$3.5 million in 2009 to about \$7.8 million in 2010. The increased budget came with the expectation that spending be focused on implementation, not additional staffing. Final budget decisions will be made by the Management Committee in April, including the money available for research awards. The proposal to the Management Committee is to set aside a total of \$1.2 million (a combination of 2009 and 2010 money) for the upcoming research program.

A discussion of the proposed budget ensued. Cornelia Schlenk pointed out that the CAC played a large role in setting the budget priorities through their proposed pie chart and noted that there was an opportunity for the STAC to become more involved in this process in the future. Charlie Yarish noted that he and Larry Swanson have met with the CAC co-chairs regarding funding priorities. Mark Tedesco reviewed a pie chart developed by the Management Committee of the additional funding to be directed to different areas. The adopted pie chart was very similar to one proposed by the CAC. Tedesco explained that the additional money for water quality identified in the pie chart would not go towards covering the CTDEP monitoring program, since that comes from base funding. Instead, the additional water quality money would go toward controlling polluted runoff, assisting local communities with urban stormwater activities and a host of projects dealing with watershed protection efforts, e.g. local programs such as the one in Oyster Bay. The priority in the pie chart related to dredging was assistance with the dredged material management plan, particularly on finding alternatives to upland disposal.

**Synthesis Book Update**

The need for this book to highlight data gaps and direct future research funding priorities was emphasized. The possibility of writing workshops for individual chapters was discussed. There was a mixed reaction among chapter leads – some were in favor of it (Biology/Ecology) while others didn't think their authors were interested (Biogeochemistry). There was a discussion regarding increasing the honoraria. The CAC is very interested in seeing the book finished and suggested an increased honorarium to try to speed up the process. Sea Grant was unsure of how to deal with the paperwork this would require. One of the STAC members said they thought a tougher deadline was a better option than increased money, but it was unclear who would enforce a tougher deadline. Charlie indicated that the publisher was very disappointed in the missed deadlines and wanted a realistic assessment of the new timeline by early summer. He named a fall deadline for chapters to be submitted to the editors.

A STAC member complained about a lack of clarity with regards to what each author was supposed to contribute. Charlie indicated this should be clear in the chapter outline, but since the Biology and Ecology chapters were merged a clear outline for this chapter has not been developed. It was agreed that the biggest hole at this time was the Biology/Ecology chapter and that pressure needs to be put on that chapter's leads to step up and get things organized. A suggestion was made for a workshop focused on chapter leads to give presentations detailing the outlines of their chapters within the April/May timeframe. The workshop could be held in two locations and videoconferenced. This idea will be pursued further.

### **CT Co-Chair Election**

Two candidates were nominated, Carmela Cuomo from the University of New Haven and Hans Dam from the University of Connecticut. Hans was unable to attend the meeting. Carmela spoke about her desire to continue to advance the role of the STAC, raise its profile within the Long Island Sound Study and bridge the gap between the STAC and CAC. Carmela was elected the new Connecticut co-chair.

### **2010 Research RFP**

A summary of the 2008 RFP: Five projects were funded; three were focused on hypoxia, one on red tides and one on climate change. There will be a meeting on March 16 in Stony Brook to discuss project updates and field logistical planning for 2010.

Julie Rose reported additional comments about the Needs Assessment from people who could not attend the meeting. She reported that Jim Latimer wanted to add a need for methods to estimate nutrient loading to embayments. He has a paper coming out regarding modeling nutrient loading to a variety of New England estuaries. Jim also noted that ecosystem services are getting more attention at EPA, specifically with regards to the development of ecosystem service indicators and upstream nutrient thresholds. He identified the need to complete research that will inform the process of setting upstream protective thresholds. Penny Howell also submitted a comment regarding pesticide management; she would like to see pesticide management added to fertilizer management within the Needs Assessment.

Discussion regarding pesticide/fertilizer management ensued. Kelly Streich pointed out that there is a state law limiting municipalities setting regulations for fertilizers. CTDEP has an existing fertilizer program for big farms. Larry Swanson noted that it would be interesting to investigate enforcement; other than at the point of sale it seems improbable. It was suggested that it might be worth investigating whether this fertilizer ends up in the Sound.

Louise Harrison suggested highlighting assessment of habitat restoration techniques as a priority area within the upcoming research RFP, specifically, a comparison of the success of different restoration techniques. Carmela Cuomo

emphasized the need to be clear in this RFP whether items that fall under monitoring, assessment and research categories all will be considered for funding or whether the RFP will include only items found under “research” within the Needs Assessment. Mark Tedesco indicated that the long-term nature of monitoring was inconsistent with the structure and goals of the RFP but that both “research” and “assessment” projects should be considered for funding.

Cornelia Schlenk discussed Sea Grant’s desire to have a specific list of topics that the STAC would like to prioritize for funding in this RFP, rather than a discussion of which category the topics fall into (i.e. research, monitoring, assessment). Sea Grant’s position is that a more targeted RFP will help them understand the priorities of the STAC and save them time in reviewing. In the last round, there were 54 pre-proposals submitted and only 5 projects eventually funded. Jim Ammerman agreed it would be helpful to have a targeted RFP.

Gary Wikfors noted that the last batch of projects had several focused on hypoxia and this created a good synergy among researchers. He suggested food web dynamics as a potential priority area for this round. Climate change was suggested as another priority topic. Bob Wilson cautioned that too focused of a RFP can be discouraging and emphasized the need to keep the targeted areas broad. Charlie Yarish suggested that climate change could be proposed as a very broad heading with subtopics such as food web dynamics. Another suggestion was to have one or two target areas for big proposals and a subset of money specifically targeted at proof of concept studies. Anne McElroy suggested a more targeted RFP, with a climate change theme, but also suggested money be available for smaller, more innovative projects. Charlie Yarish inquired whether scientists themselves will be part of the review process and how will Sea Grant address EPA’s conflict of interest issue. Cornelia indicated that academics will be added to the review committee. Mark Tedesco stated that if it is an EPA RFP, someone who is submitting a proposal or who is from the same institution as someone submitting a proposal shouldn’t be involved in the review. In the full proposal review, people outside of the institution will be called in to review. In the pre-proposal review, there should be a couple of people from outside CT or NY institutions. Stuart Findlay expressed his discomfort with having the whole RFP center on climate change, and suggested having two or three topics. He suggested adding “habitat change”, which would deal with marsh loss, SAV changes, etc. Carmela asked if the RFP could favor smaller, innovative projects by setting a lower cap on overhead and research per project? She suggested this would be a good way to get new ideas for dealing with LIS issues. Charlie Yarish did not favor lowering the cap on overhead.

Senjie Lin said that the problem with too broad of a topic is that when research results come back in, it is too difficult to synthesize them. He favored a food web dynamics focus but also a focus on production. Anne McElroy also liked the idea of food web dynamics as one topic because it allows researchers to consider as drivers climate change and eutrophication – the result being more focus but allowing a diversity of approaches. Cornelia suggested picking a topic and using the Needs

Assessment to determine what subheadings appear under the larger topic. Charlie Yarish noted that Roman Zajac had very useful suggestions for priorities after finishing his EcoPath model, which have been incorporated into the Needs Assessment.

Larry suggested the group seemed to be coming to a consensus on the following topic list: 1) Habitat Change, 2) Food Web Dynamics and 3) Climate Change. A comment was made requesting clarification on whether habitat change could include an assessment of restoration techniques. Gary Wikfors suggested changing the title to “Habitat Protection and Restoration” with several research and assessment items underneath it as subtopics. Carmela Cuomo agreed and suggested that habitat-related research needs specified in the Needs Assessment be added. A STAC member commented that there needed to be room for species conservation work within the RFP topics. Another STAC member suggested tweaking the Climate Change heading to be “Climate Change and Anthropogenic Influences as Drivers for Other Topics”.

Mark Tedesco stated that he did not see the need for a smaller subset of topics, and that he was comfortable with having the RFP refer to the entire Needs Assessment in the RFP. Cornelia Schlenk stated that this approach then calls on the pre-proposal reviewers to rank research needs and priorities and that Sea Grant preferred to have the STAC identify their priorities instead. Carmela Cuomo suggested changing “Food Web Dynamics” to “Ecosystem Dynamics” to make it more broad. It was suggested that flexibility be built into the RFP so that if a researcher comes up with a great idea that isn’t within the topics identified, there is still a mechanism for considering the project. Bob Wilson pointed out that if the STAC is interested in projects that emphasize linkages between research and management, this needs to be clearly articulated in the RFP. Mark Tedesco agreed that applicants should be required to state how their research would inform management decisions.

### **Bioextraction Initiatives in Long Island Sound**

Julie Rose presented a summary of the International Workshop on Bioextractive Technologies for Nutrient Remediation, held December 3 and 4, 2009 at UConn Stamford. Larry Swanson emphasized the charge put on the Long Island Sound Study and the STAC to take the information from the workshop to move forward with initiatives in Long Island Sound. Julie Rose requested that STAC members send her information about ongoing local projects related to bioextraction so she can aggregate and highlight ongoing work on the bioextraction website.

A discussion of the upcoming Bronx River mussel project ensued. Gary Wikfors reported that his group is planning to use the initial mussel biomass removed for analysis, but that work will also be done to identify future markets for increased biomass. Gary also reported that his group will be monitoring biodeposition. Charlie deQuillfeldt stated that the water quality modeling work done to date did not have enough data inputs to accurately model results and also expressed doubts that bioextraction would work at a Sound-wide scale. Another STAC member

commented that the approach seems promising on a local scale. NYC DEP is putting oysters on a small scale into Jamaica Bay. There was discussion of using bioextraction to augment sewage treatment plant upgrades and also the question of what to do with large increases in shellfish biomass. Carmela Cuomo suggested also including microalgae as part of bioextractive technologies given projects currently underway in Arizona and Colorado to convert algal production at sewage treatment plants to biofuels. Carmela also suggested that funding for this type of work could be leveraged in DC because of the green jobs aspect. The question was raised as to whether this would be included in the research RFP but the focus right now is on implementation projects, which are supported by the Futures Fund. Future funding for economic/market analysis might be more appropriate to target from the research program.

### **Water Quality Modeling Enhancements**

Mark Tedesco stated that \$200,000 has been set aside for modeling enhancements in Long Island Sound with more being proposed but that the specific needs to target with this money have not been identified. The LISO would like STAC input on developing a RFP. Stuart Findlay, Carmela Cuomo, Jim Fitzpatrick, and Larry Swanson volunteered to be on the committee. Larry also volunteered Bob Wilson. A STAC member stated that research still needs to be done (e.g. community respiration, settling rates) to bolster the existing model before additional enhancements are undertaken. Jim Fitzpatrick noted that additional observations may also be needed to support modeling. Carmela Cuomo stated that some data exists (e.g. benthic oxygen demand) that has not been incorporated into the SWEM model. Senjie Lin emphasized the need for additional primary production data that incorporates recent technology such as the FRRF or Cytobuoy. Art Glowka inquired why there was still hypoxia in LIS. Carmela Cuomo stated that many things contribute to hypoxia in the Sound, including changes to the benthic community, organic matter storage and temperature. Charlie Yarish stated that we need to remove the legacy to address the problem.

### **STAC Fellowship**

Julie Rose reviewed the change in the timing of the STAC Fellowship approved at the last STAC meeting to allow masters and final-year Ph.D. students to participate. The new proposed schedule would be one calendar year beginning in June. She also reviewed the changed language in the RFP to require a student's advisor to update Sea Grant on the status of the Fellow if the student quits. There was some discussion of the reporting requirement, which is now set at every six months. A STAC member noted that a larger problem this year has been in a lack of guidance and clarity provided by the STAC to the STAC Fellows in terms of expectations and tasks. At the October meeting, the STAC was unable to come up with specific projects for this year's STAC Fellows. The suggestion was made at the October meeting that specific projects be identified before June so that the Fellows can begin work immediately. Another STAC member pointed out that with the limited number of applications, it is difficult to set priorities ahead of time. Carmela Cuomo stated that given the large number of literature-based needs, the STAC should easily

be able to come up with 5-10 proposed projects that would cover a wide range of topics. Gary Wikfors suggested the STAC Fellows complete an annotated bibliography of their research area as one of their tasks. Elizabeth Pillsbury's report on shellfish was cited as a good example of this type of literature-based work. There was some discussion over whether it would be a good idea to put a list of topics into the fellowship application or whether this would be too constraining. A consensus on this matter was not achieved.

### **Future STAC Agenda items**

**The following suggestions were offered: have a technical presentation to foster science discussion, an update on the CAC Soundvision effort, update on the Long Island Sound Futures Fund review process, updates/presentations on the LIS Synthesis effort. Additional ideas should be sent to Carmela Cuomo and Larry Swanson. The next meeting was scheduled for June 18, 2010 (note- this meeting date is being rescheduled to July). Meeting adjourned.**